

1      **CLAIMS**

- 2      1.      A method comprising  
3                at a web server, providing web-based map viewing,  
4                publishing, and provisioning services, and  
5                centrally storing map information for use in providing the  
6                services.
- 1      2.      The method of claim 1 also including  
2                receiving from an application server or a mapping server  
3                requests associated with the viewing, provisioning, or publishing  
4                of maps, and  
5                providing a bridging function that includes reformatting the  
6                requests into non-proprietary standardized formats.
- 1      3.      The method of claim 1 also including  
2                storing the map information in a database,  
3                abstracting the map information to generate metadata that  
4                represents the information, and  
5                enabling a mapping application to access the metadata.
- 1      4.      The method of claim 1 also including

- 2 receiving requests that relate to viewing, publishing, or  
3 provisioning web-based maps, and
- 4 serving the requests at least in part by accessing remote  
5 application service provider functions.
- 1 5. The method of claim 4 in which the functions include  
2 locating addresses or finding shortest paths.
- 1 6. The method of claim 1 also including
- 2 enabling a user to upload map data from a client through  
3 the Internet to the server for use in executing the publishing and  
4 provisioning services.
- 1 7. The method of claim 6 in which the uploaded map data is  
2 automatically integrated with the stored map information for  
3 access by remote viewers.
- 1 8. The method of claim 1 also including
- 2 enabling a user at a web-client to define and build maps  
3 and spatial graphics by interaction with the server.
- 1 9. The method of claim 1 also including
- 2 enabling users to categorize how web-based maps and map  
3 layers will appear based on style definitions.
- 1 10. The method of claim 1 also including
- 2 enforcing levels of security to control access by users to the  
3 viewing, publishing, and provisioning services.

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- 1 11. The method of claim 1 also including  
2 managing access by users to the viewing, publishing, and  
3 provisioning services by grouping the users according to their  
4 rights to use the respective services.
- 1 12. The method of claim 6 also including  
2 guiding the user interactively to define the data sets, select  
3 the data files to upload, and initiate the upload.
- 1 13. The method of claim 1 also including  
2 enabling a user at a client to preview a map over-the-web  
3 prior to provisioning the map.
- 1 14. The method of claim 1 also including  
2 enabling a user at a client to publish a map by a single  
3 mouse click to initiate publishing at the server.
- 1 15. The method of claim 1 also including  
2 enabling a user at a client to define an initial map extent  
3 using a web-based interface.
- 1 16. The method of claim 1 also including  
2 enabling a user at a client to define visual attributes of a  
3 layer.
- 1 17. The method of claim 16 also including  
2 providing the user a palette of selections for a layer element  
3 property.



- 1    18.    The method of claim 1 also including
  - 2                 enabling a user at a client to define theming of map and
  - 3                 spatial information using a web-based interface.
  
- 1    19.    The method of claim 1 also including
  - 2                 enabling a user at a client to incorporate image data into
  - 3                 maps using a web-based interface.
  
- 1    20.    The method of claim 1 also including
  - 2                 enabling a user to print electronic maps using a web-based
  - 3                 interface.
  
- 1    21.    The method of claim 1 also including
  - 2                 enabling a user at a client to define and include map
  - 3                 accessory information.
  
- 1    22.    The method of claim 1 also including
  - 2                 enabling a user at a client to control the layout of a map and
  - 3                 accessory information using an interface layout panel that enables
  - 4                 dragging and positioning of components.

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